



Status of implementation of the INSPIRE Directive – 2016 Country Fiches

COUNTRY FICHE Bulgaria

Introduction	1
1. State of Play.....	2
1.1 Coordination.....	2
1.2 Functioning and coordination of the infrastructure	3
1.3 Usage of the infrastructure for spatial information	3
1.4 Data Sharing Arrangements.....	3
1.5 Costs and Benefits	3
2 Key Facts and Figures	4
2.1. Identification of spatial data with relevance to the environment (step 1)	4
2.2 Documentation of the data (metadata)	6
2.3. Accessibility of the data through digital services (step 3)	8
2.4. Interoperability of spatial data sets (step 4).....	10
3. Outlook.....	11
4. Summary - How is Country doing?.....	12
Specific recommendations:	13

Introduction

The INSPIRE Directive sets the minimum conditions for interoperable sharing and exchange of spatial data across Europe as part of a larger European Interoperability Framework and the e-Government Action Plan that contributes to the Digital Single Market Agenda. Article 21 of [INSPIRE Directive](#) defines the basic principles for monitoring and reporting. More detailed implementing rules regarding INSPIRE monitoring and reporting have been adopted as [COMMISSION DECISION regarding INSPIRE monitoring and reporting](#) on the 5th of June 2009.

This country fiche highlights the progress of Bulgaria in the various areas of INSPIRE implementation and presents an outlook of planned actions for further improvement of the INSPIRE implementation. The country fiche includes information **until May 2016** as a summary of the information acquired through:

- the 2016 [tri-annual INSPIRE implementation report](#),
- [monitoring report](#) in May 2016,

- a [bilateral meeting](#) on the implementation of the INSPIRE Directive between the Commission and Bulgaria representatives.

1. State of Play

A high-level view on the governance, use and impact of the INSPIRE Directive in Bulgaria. More detailed information is available on the [INSPIRE knowledge base](#).

The content of the chapter is tagged according to 5 criteria of better regulation:

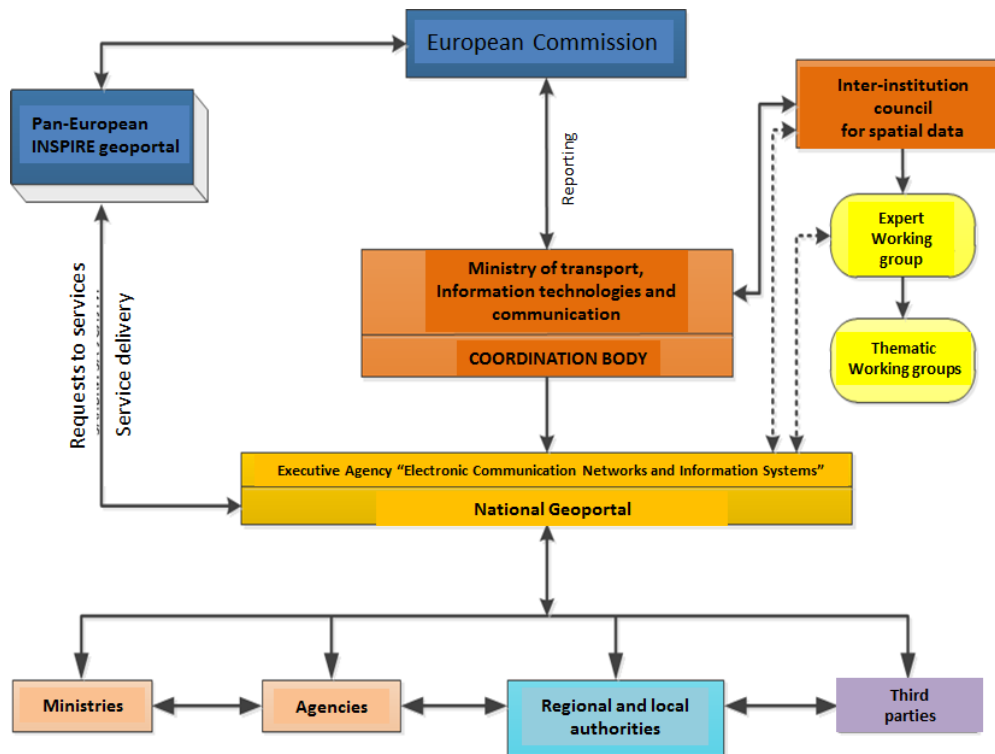
- **[Effectiveness]** How successful has the INSPIRE implementation been in achieving, progressing towards its objectives; progress made, gaps, what factors have influenced or why it has not yet been achieved regarding availability of services, data interoperability, sharing, data policy obstacles
- **[Efficiency]** Costs (numbers or difficulties to evaluate them); benefits (qualitative or quantitative) already visible.
- **[Relevance]** Is it still relevant to make data interoperable, remove obstacles of data sharing, drive collaboration between public services, necessary for National SDI, use cross-sector, requested by eGovernment, modernisation of public admin, etc.; support given by National Institutions for implementation
- **[Coherence]** Internal coherence of INSPIRE provisions proved by implementation; cross-border applications; coherence with other National and EU policies
- **[EU-added value]** Improvement of EU cross-border data management and use; use for environmental monitoring and reporting, use for and with Copernicus data; use cross-sector.

1.1 Coordination

- National Contact point

Name of public authority	Ministry of Transport, Information Technology and Communications;
Mailing address	
Telephone number	+359 2 940 93 01
Fax number	+359 2 940 98 24
E-mail	info@esmis.government.bg
Website address	esmis.government.bg
Contact person	Nikolay Ivanov (MIG-T), Georgi Gladkov (MIG-P)
Telephone number	+359 2 949 21 15
E-mail	nipetrov@esmis.government.bg , ggladkov@esmis.government.bg

- Coordination Structure



- Progress
 - Amendment of national legislation transposing INSPIRE legal acts (Law on the Access to Spatial Information).
 - Increased role of the intergovernmental council for spatial data through inclusion of high level governmental representatives. **[Coherence]**

1.2 Functioning and coordination of the infrastructure

- Plan for speeding up of the implementation of INSPIRE is adopted on 10 June 2015.
- Draft decision of the Council of Ministers on the subdivision of roles of data providers.
- Established expert working group below the intergovernmental council, which supports its activity on a technical level.
- Series of trainings for providers are organized.
- The national discovery service is connected to the pan-European geoportal with a very high compliance of available metadata records. **[Effectiveness]**

1.3 Usage of the infrastructure for spatial information

- Difficult to estimate, as the discovery services has been established just before the reporting. Google analytics data in the report mentions visitors from 16 countries after connecting to the pan-European geoportal.
- Some good examples of data from the SDI used are provided without direct reference to INSPIRE.

1.4 Data Sharing Arrangements

- Each institution upon request prepares a bilateral letter of agreement on data. Examples on environmental, agricultural and business statistics are provided.

1.5 Costs and Benefits

- Costs
 - Difficulty to quantify is communicated, as INSPIRE obligations are also used to meet national obligations.
 - Expenditure is communicated to be 1.4 million euro with a plan for another 3.4 million.

- Benefits **[Efficiency]**
 - Improved efficiency because of the reuse of data.
 - Better IT architectures.
 - Time saved for internal activities of institutions (incl. Statistical Institute, Military geographic service, Ministry of environment and waters.
 - Expectation is communicated for more benefits as result of a multiplier effect when more implementations become a fact.

2 Key Facts and Figures

In addition to the above mentioned issues, the implementation of INSPIRE Directive requires Member States to take four main steps in relation to management of spatial datasets which fall under the Directive:

- Step 1: Identify spatial datasets
- Step 2: Document these datasets (metadata)
- Step 3: Provide services for identified spatial datasets (discovery, view, download)
- Step 4: Make spatial datasets interoperable by aligning them with the common data models.

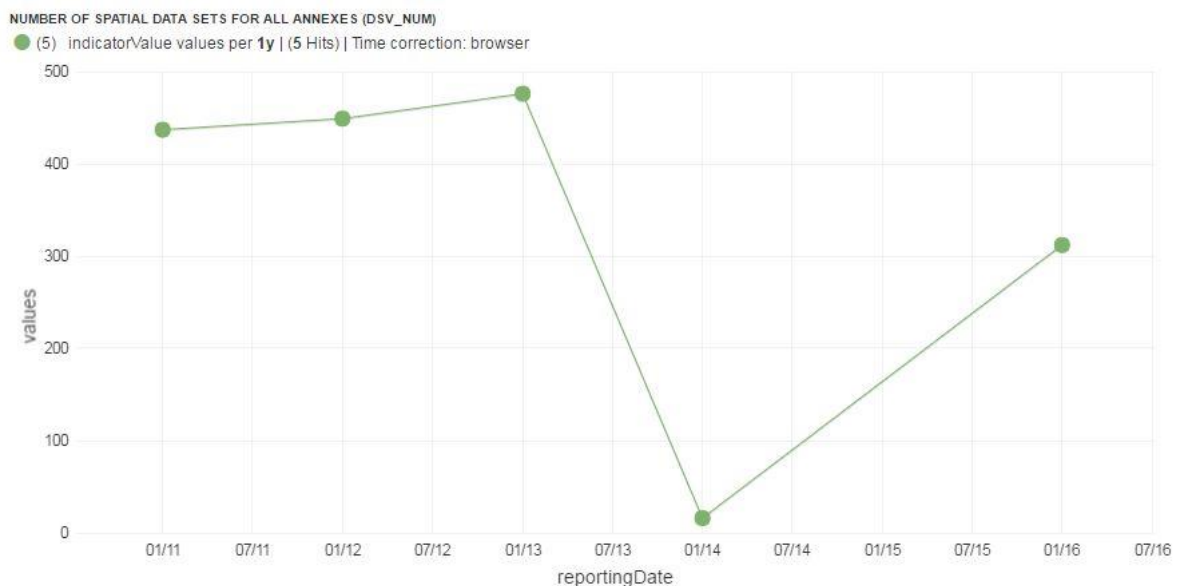
The key facts and figures presented in this country fiche are based on the information provided by Bulgaria on the [INSPIRE dashboard](#). **The provided statistics is not reflecting the data available on [INSPIRE geoportal](#).** The INSPIRE geoportal is updated on a regular and ongoing basis, whilst the INSPIRE dashboard is typically updated after every reporting round, on a yearly basis.

The conformity of the implementation is assessed against the full set of legal specifications set out by the Directive and the Implementing Rules and the commonly agreed good practices set out by the technical guidelines.

2.1. Identification of spatial data with relevance to the environment (step 1)

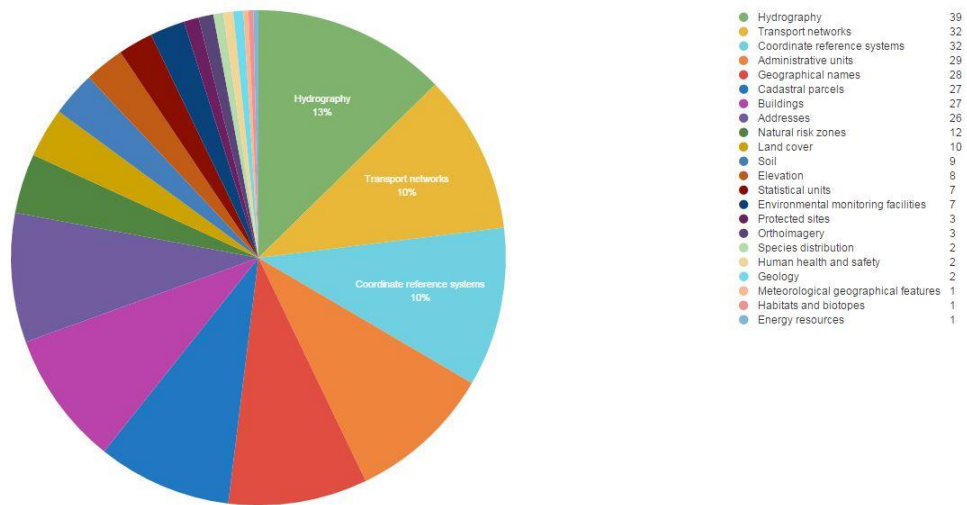
a. Evolution of the data offering

DSv_Num: number of spatial data sets for all Annexes



b. Data sets made available per INSPIRE theme in 2015

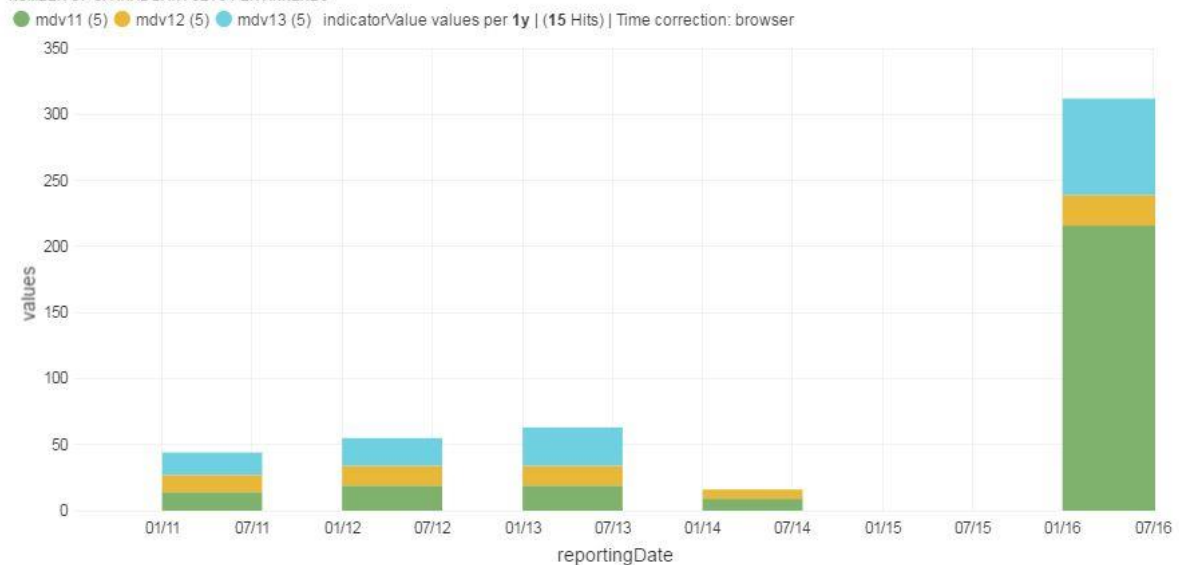
NUMBER OF RECORD PER THEMES



c. Data sets per annex (Annex 1 & 2: spatial reference data; Annex 3: environmental spatial data)

MDv1.1 (green): number of spatial data sets for Annex I that have metadata
 MDv1.2 (yellow): number of spatial data sets for Annex II that have metadata
 MDv1.3 (blue): number of spatial data sets for Annex III that have metadata

NUMBER OF SPATIAL DATA SETS PER ANNEXES



Evaluation of progress for step 1:

Bulgaria has identified a total of 312 spatial data sets with relation to the themes listed in the INSPIRE annexes.

There is a big increase of identified spatial data sets since 2014, under all Annex I – III data themes. A lot of relevant spatial data sets have already been identified for the different data themes. However, the identification still seems incomplete and Bulgaria could further improve by identifying and documenting spatial data sets required under the existing reporting and monitoring regulations of EU environmental law.

2.2 Documentation of the data (metadata) (step 2)

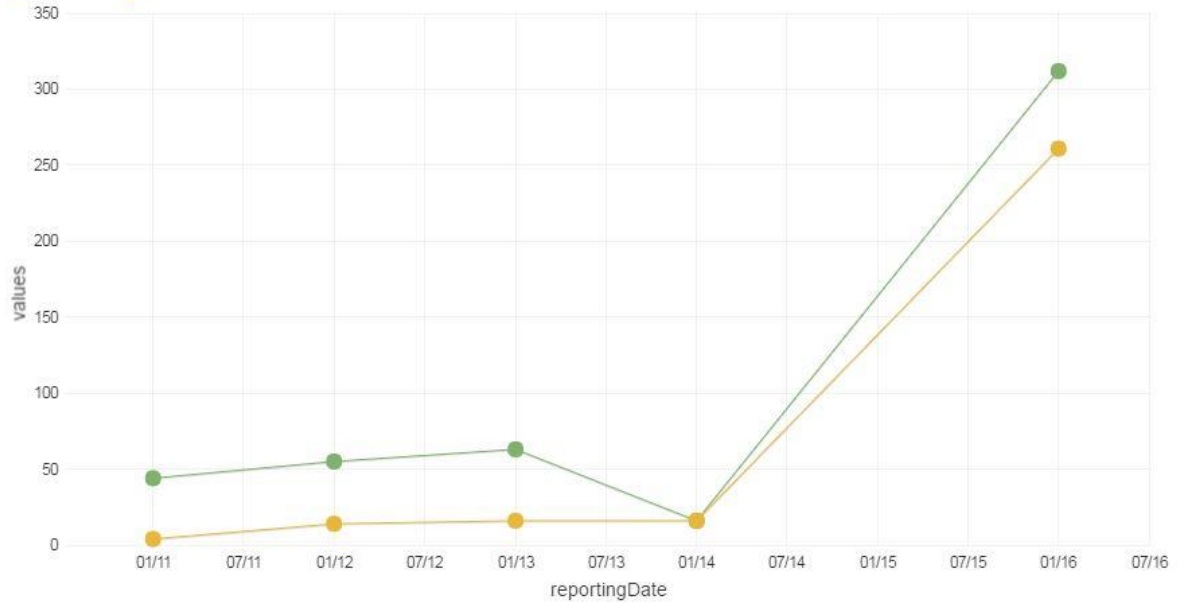
a. Evolution of documented data and conformity of the documentation

MDv1_DS (green): number of spatial data sets for all Annexes that have metadata

MDv2_DS (yellow): number of spatial data sets for all Annexes that have conformant metadata

NUMBER OF SPATIAL DATA SET THAT HAVE METADATA (MDV1_DS) AND HAVE CONFORMANT METADATA (MDV2_DS)

● mdv1_ds (5) ● mdv2_ds (5) indicatorValue values per 1y | (10 Hits) | Time correction: browser



b. Documented data per annex in 2015

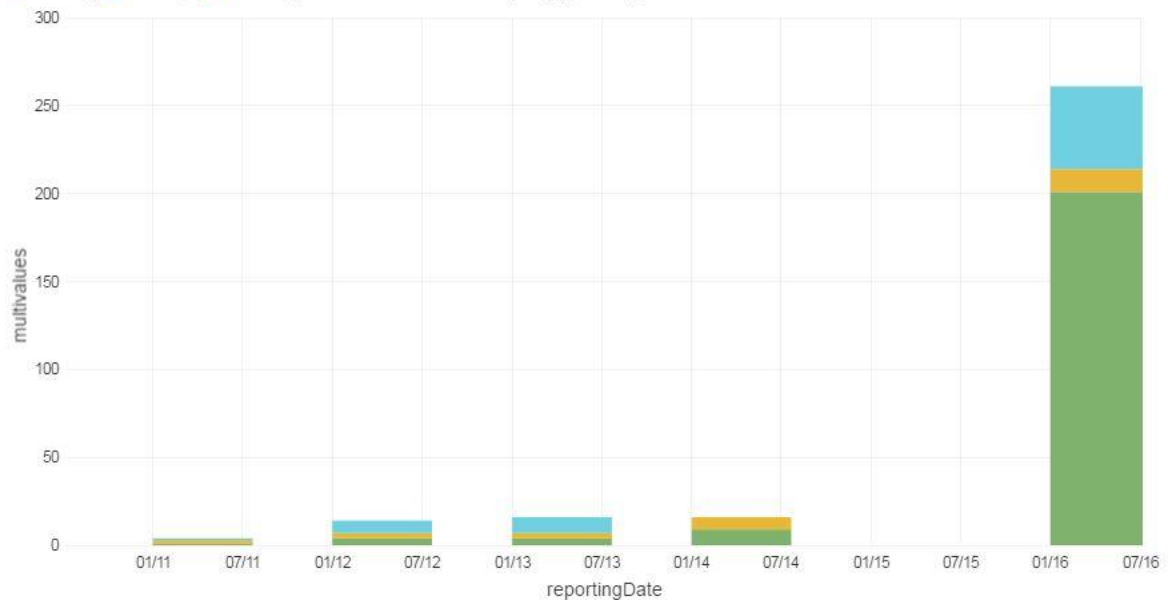
MDv2.1 (green): number of spatial data sets for Annex I that have conformant metadata

MDv2.2 (yellow): number of spatial data sets for Annex II that have conformant metadata

MDv2.3 (blue): number of spatial data sets for Annex III that have conformant metadata

NUMBER OF SPATIAL DATA SETS THAT HAVE CONFORMANT METADATA PER ANNEXES

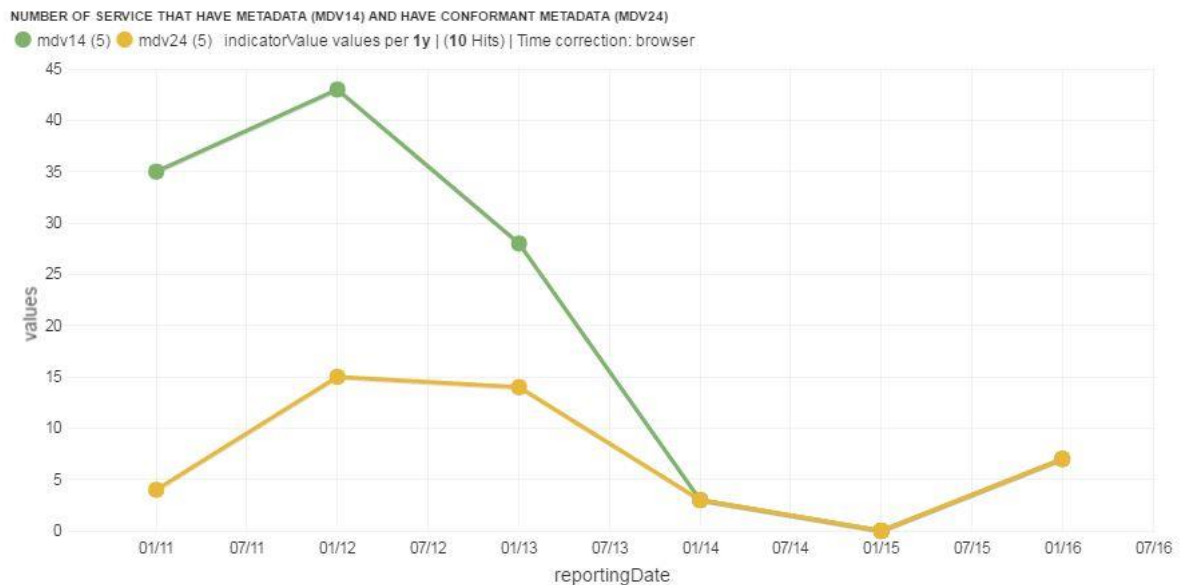
● mdv21 (5) ● mdv22 (5) ● mdv23 (5) indicatorValue multivalues per 1y | (15 Hits) | Time correction: browser



c. Evolution of documented services and conformity of the documentation

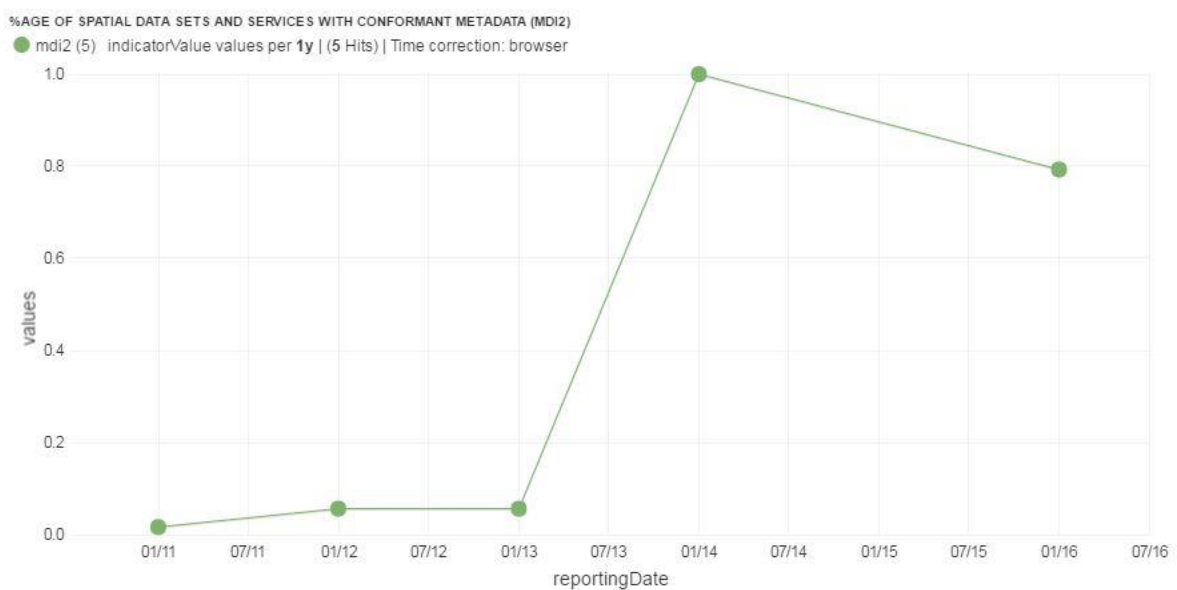
MDv1.4 (green): number of spatial data services that have metadata

MDv2.4 (yellow): number of spatial data services that have conformant metadata



d. Evolution of the overall conformity of the documented metadata

MDi2 = (number of spatial data sets for all Annexes that have conformant metadata + number of spatial data services that have conformant metadata) / (number of spatial data sets for all Annexes + number of spatial data services)



Evaluation of progress for step 2:

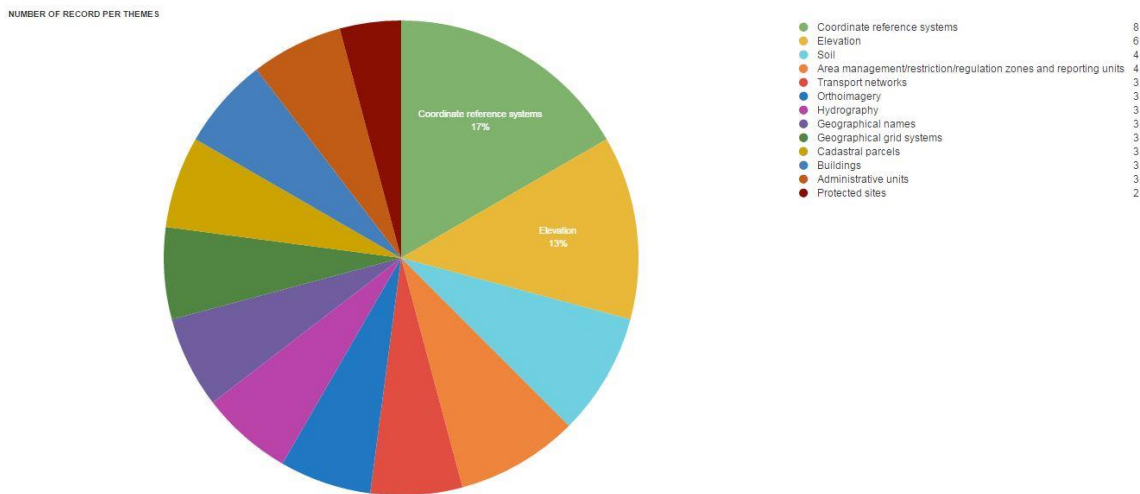
Bulgaria has documented and published metadata through a digital discovery service for 100% of the identified spatial data sets and 26,92% (7 out of 26) of the digital services. Overall, 79,28% of the Bulgarian metadata conforms to the INSPIRE metadata specifications.

The documentation of spatial data sets has further improved and shows a high level of maturity. The documentation of digital services is lagging behind and should be addressed. To support data discovery for the end-users of the INSPIRE infrastructure, Bulgaria should aim to achieve better technical conformity of the available metadata.

2.3. Accessibility of the data through digital services (step 3)

a. Digitally accessible spatial data per INSPIRE theme in 2015

Note: This figure reflects the amount of spatial data sets made available through a digital service, not the amount of available digital services. A digital service can make several spatial data sets available.



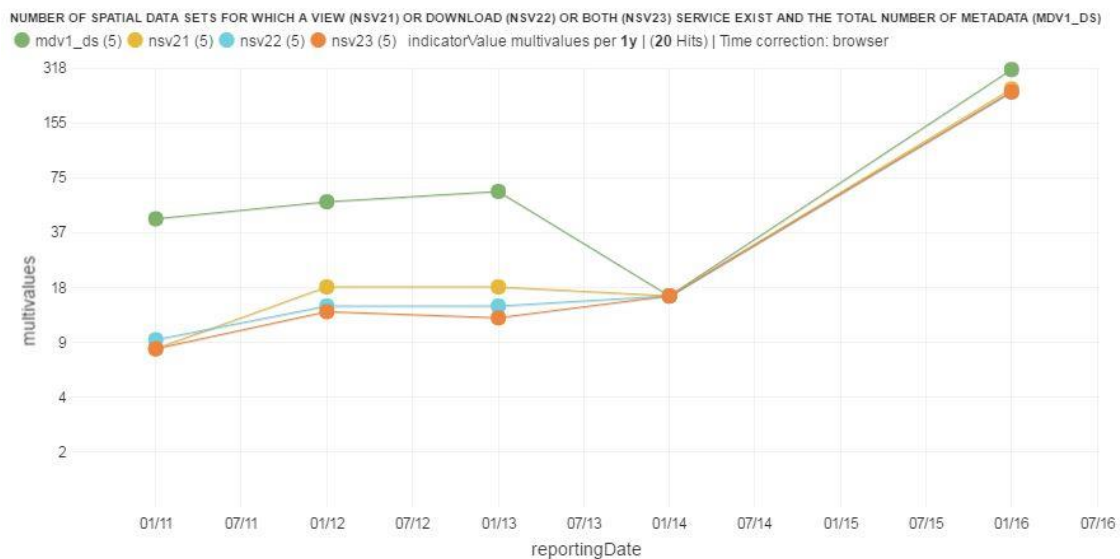
b. Evolution of spatial data made accessible through digital services

MDv1_DS (green): number of spatial data sets for all Annexes that have metadata

NSv2.1 yellow): number of spatial data sets for which a view service exists

NSv2.2 (blue): number of spatial data sets for which a download service exists

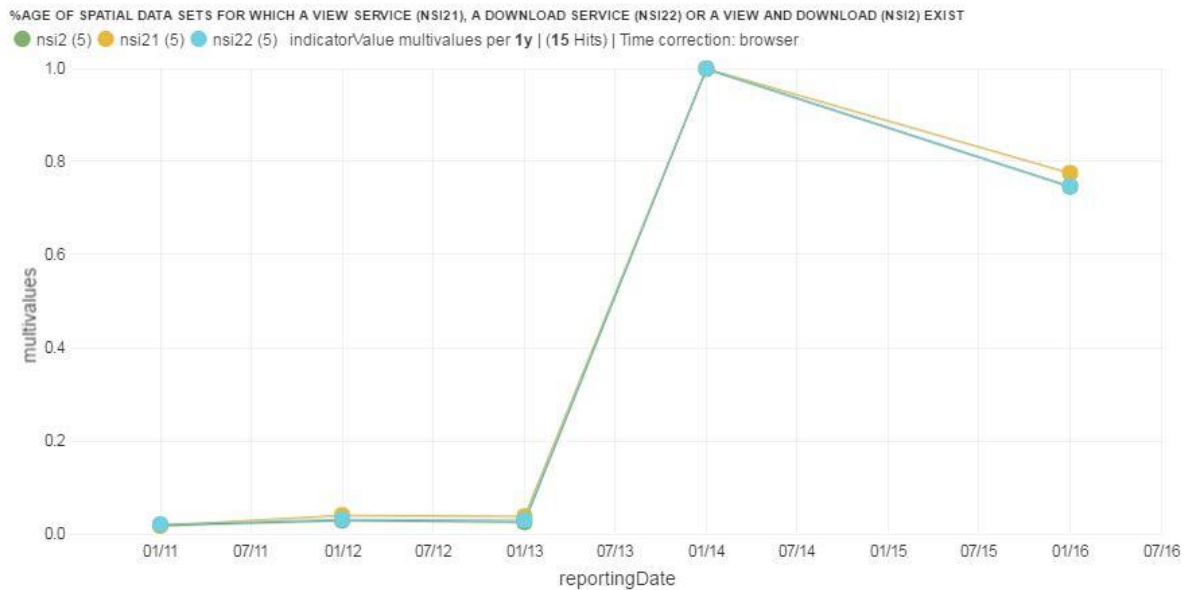
NSv2.3 (orange): number of spatial data sets for which both a view and a download service exists



NSi2 (green) = number of spatial data sets for which both a view and a download service exists / number of spatial data sets for all Annexes

NSi2.1 (yellow) = number of spatial data sets for which a view service exists / number of spatial data sets for all Annexes

NSi2.2 (blue) = number of spatial data sets for which a download service exists / number of spatial data sets for all Annexes



c. Evolution of the conformity of the digital services

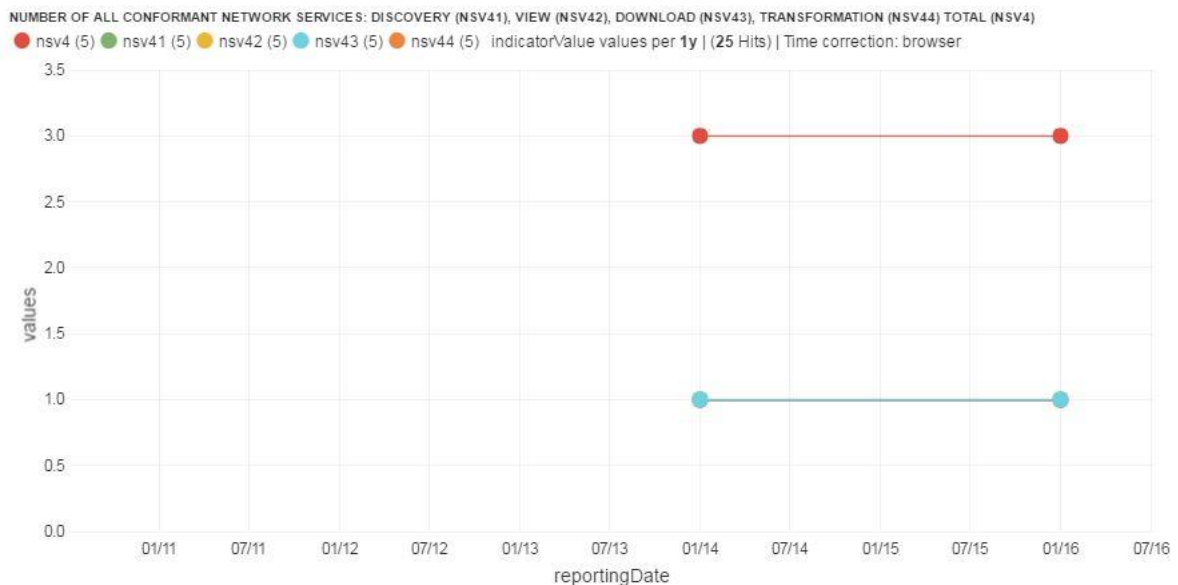
NSv4 (red): number of all conformant network services

NSv4.1 (green): number of conformant discovery network services

NSv4.2 (yellow): number of conformant view network services

NSv4.3 (blue): number of conformant download network services

NSv4.4 (orange): number of conformant transformation network services



Evaluation of progress for step 3:

Bulgaria has:

- 77,56% of its data sets accessible for viewing through a view service;
- 74,67% of its data sets accessible for download through a download service.

11,54% (3 out of 26) of the available digital services are conform to the INSPIRE network service specifications.

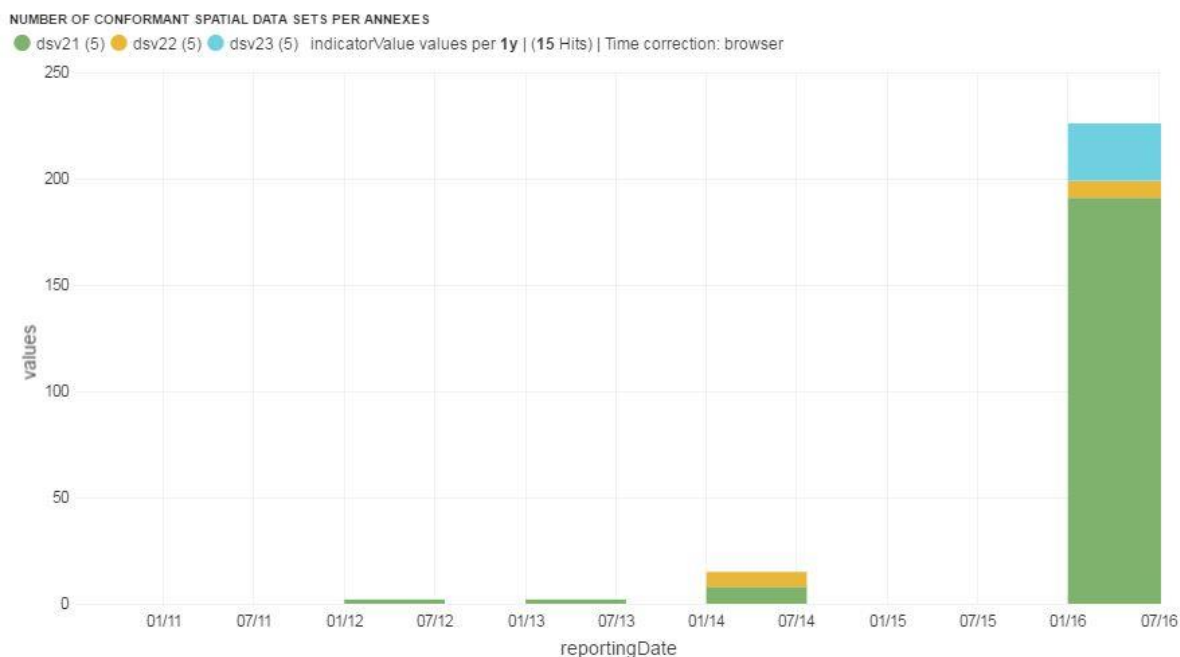
Bulgaria shows that it has built the necessary capacity and competences to make data accessible through digital INSPIRE network services. The offering is stagnating and a significant amount of the spatial data still has to be brought online. The technical conformity of the available services with the INSPIRE network service specifications is poor. Bulgaria should boost their effort to further improve the accessibility of their spatial data through digital INSPIRE services.

2.4. Interoperability of spatial data sets (step 4)

The interoperability of spatial data sets is an outlook on the readiness of Member States to make their spatial data interoperable according to the interoperability specifications laid down in the INSPIRE interoperability implementing regulation ([Commission Regulation \(EU\) No 1089/2010](#)). The deadlines for implementation of the spatial data interoperability are in the future: 23/11/2017 for Annex I data and 21/10/2020 for Annex II and III data.

a. Evolution of the conformity with INSPIRE interoperability specifications for spatial data

DSv2.1 (green): number of conformant spatial data sets with conformant metadata for Annex I
 DSv2.2 (yellow): number of conformant spatial data sets with conformant metadata for Annex II
 DSv2.3 (blue): number of conformant spatial data sets with conformant metadata for Annex III



Evaluation of progress for step 4:

Bulgaria has reported 226 data sets to be conform to the INSPIRE interoperability specifications in 2015.

We can conclude that Bulgaria has started its preparations for the 2017/2020 data interoperability deadlines.

3. Outlook

Bulgaria has critically reviewed their INSPIRE implementation and provided an [action plan](#) in 2016 to remediate existing implementation issues and further improve the overall conformity of the implementation. The following actions are set up to directly address previously identified issues:

a. Coordination (1.1; 1.2)

- A decision of the Council of Ministers has been drafted on the subdivision of roles of data providers.
- An expert working group has been established, operating below the intergovernmental council, which supports its activity on a technical level.
- Series of trainings for data providers are already organized and/or planned for the near future.
- Regular meetings are organized with data providers, coordinated by the Bulgarian INSPIRE MIG-P and MIG-T representatives.

b. Data sharing and exchange (1.4)

- A number of bilateral agreements addressing data sharing are signed. Those agreements are however often signed on an ad-hoc basis, and do not explicitly consider INSPIRE.
- The Council of Ministers decree mentioned under pt. 'a' (above) targets, among other things, the coordination and streamlining of agreements between providers under the umbrella of INSPIRE.

c. Metadata (2.2)

- The currently existing temporary discovery service is planned to evolve into a fully functional system. Currently the existing metadata records validate with a score of 100 % with the [JRC INSPIRE validator](#).
- Technical and organizational lessons learned from the implementation of the temporary discovery service will be used for the establishment of a fully functional operational system.






















d. Network services (2.3)

- A growing number of network services (mainly view and download) are made available by Bulgarian data providers.
- It is at present difficult to assess the value and interest by users, provided that the national geoportal was only recently put in place.
- The country report provides information on projects which established systems, relevant to INSPIRE.
- The INSPIRE country report for Bulgaria provides examples of value-added applications based on INSPIRE network services for national (the majority), and European use cases.

e. Data Interoperability (2.4)

- Deadlines in the action plan are identified (and to certain extent coordinated with the INSPIRE roadmap) per data provider.
- The current capacity of providers to harmonize data is a serious obstacle for the alignment to INSPIRE data models.

4. Summary - How is Country doing?

INSPIRE key obligation	Overall implementation status and trend	Outlook	Dashboard Legend
Ensure effective coordination			<p>Implementation Status:</p> <p>: implementation of this provision is well advanced or (nearly) completed. Outstanding issues are minor and can be addressed easily.</p> <p>: implementation of this provision has started and made some progress but is still far from being complete. Outstanding issues are significant and need to be addressed to ensure that the objectives of the legislation can still be reached by 2020.</p> <p>: implementation of this provision is falling significantly behind or has not even started. Serious efforts are necessary to close implementation gap.</p> <p>Trend:</p> <p>: the trend of the implementation is positive.</p> <p>: the trend of the implementation is neutral.</p> <p>: the trend of the implementation is negative.</p> <p>Outlook:</p> <p>: clear and targeted actions have been identified which allow reaching the objectives of the legislation in an effective way.</p> <p>: No real progress has been made in the recent past or actions which have been identified are not clear and targeted enough to predict a more positive outlook.</p> <p>: no actions have been identified to overcome identified implementation gaps.</p>
Data sharing without obstacles			
Step 1: Identify spatial datasets			
Step 2: Document datasets (metadata)			
Step 3: Provide services for identified spatial datasets (discovery, view, download)			
Step 4: Make spatial datasets interoperable by aligning them with the common data models.			

Specific recommendations:

For each Member State, the accessibility of environmental data (based on what the INSPIRE Directive envisages) as well as data-sharing policies have been systematically reviewed.

Bulgaria has indicated in the 3-yearly INSPIRE implementation report that the necessary data-sharing policies allowing access and use of spatial data by national administrations, other Member States' administrations and EU institutions without procedural obstacles are not available.

Assessments of monitoring reports issued by Bulgaria and the spatial information that Bulgaria has published on the INSPIRE geoportal indicate that not all spatial information needed for the evaluation and implementation of EU environmental law has been made available or is accessible. The larger part of this missing spatial information consists of the environmental data required to be made available under the existing reporting and monitoring regulations of EU environmental law.

Suggested action

- Critically review the effectiveness of its data policies and amend them, taking 'best practices' into consideration.
- Identify and document all spatial data sets required for the implementation of environmental law, and make the data and documentation at least accessible 'as is' to other public authorities and the public through the digital services foreseen in the INSPIRE Directive.